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10/596,379	06/12/2006	Xiaowei Shi	CN 030060	5920
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EXAMINER				
BROMELL, ALEXANDRIA Y				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,379

Applicant(s)

SHI, XIAOWEI

Examiner

ALEXANDRIA Y. BROMELL

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/CDC)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment and Arguments

1. This Office Action is in response to Applicant's amendment filed on April 3, 2008.
2. Claims 1 – 16 are pending in this Office action.
3. Applicant's amendment with respect to claims 1 – 11 have been fully considered and are persuasive. The rejection for claims 1 – 11 of 35 U.S. C. 101 has been withdrawn, but the rejection of 35 U.S. C. 101 for claims 12 – 15 is not persuasive.
4. Applicant's arguments with respect to claims 1 – 16 have been fully considered but they are not persuasive.

With respect to claims 1 and 12, Applicant argues that neither Mancisidor or Schaffer teach matching the received information with a fuzzy user file which includes a user's selecting characteristic by inference of fuzzy logic. Examiner responds that Mancisidor teaches that the system employs fuzzy logic, variables, and sets to establish and manage user information, [0036-0040]. Schaffer teaches that recommendations are created by using fuzzy logic along with weighting values and other factors, [0027], and recommendations may be made based on information that a user has previously flagged as being of interest, [0029], but that does not mean that the recommendations are exactly what the user has flagged (fuzzy).

With respect to claim 3, Applicant argues that neither Mancisor nor Schaffer teach judging the user's actual interest-degree according to a relative ratio of an amount of time in which the user watches the recommended information. Examiner responds that Schaffer teaches judging the user's actual interest-degree according to the relative ratio of an amount of time in which the user watches the recommended information to an amount of time in which said recommended information is actually broadcast, thereby updating the user's parameters (i.e. users interest can be determined by calculating a weighted value w , based on a function of the time the user is watching a program, [0027]).

With respect to claim 4, Applicant argues that neither Mancisor nor Schaffer teach a ternary array. Examiner responds that the information present in an array are included in customer characteristics are based on content characteristics (personality profile), preference (nominal recommendation), and weight, [0027, figure 6].

For the above reasons, Examiner believed that rejection of the last Office action was proper.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims 12 – 16 are rejected under 35 USC 101 for being "software per se".

The claimed invention is addressed to "a system" that can be interpreted as referring to lines of programming within a computer system, rather than referring to the system as a physical object. The claimed invention is also addressed to information receiving means, fuzzy matching means and sieving means that are not a hardware system but are a software system. Accordingly, the claim becomes nothing more than sets of software instructions which are "software per se".

"Software per se" is non-statutory under 35 USC 101 because it is merely a set instruction without any defined tangible output or tangible result being produced. The requirement for tangible result under 35 USC 101 is defined in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47USPQ2d 1596 (Fed. Cir. 1998).

As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

In paragraph [0123], the Applicant states that the invention can be built in a set top box or personal digital recorder, which indicates that it may be software.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer”).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rod Mancisidor et al. (U.S. Patent Publication 20020116243), hereinafter, "Mancisidor," and further in view of David Schaffer et al. (20020108113), hereinafter, "Schaffer."

With respect to claim 1, Mancisidor teaches receiving information which includes specific information characteristics (i.e. customer characteristics and traits are received by system, [0037, 0038]), and recommending matched information according to the predetermined conditions to the user according to the matching result (i.e. recommendation information is provided to the customer based on customer characteristics, [0063]). Mancisidor teaches that the system employs fuzzy logic, variables, and sets to establish and manage user information, [0036-0040]. Mancisidor does not explicitly disclose how the user information is matched using fuzzy logic to make recommendations. However, Schaffer teaches matching said received information with a user file which includes the user's selecting characteristic by inference of the fuzzy logic (i.e. recommendations are created by using fuzzy logic along with weighting values and other factors, [0027]), and recommendations may be made based on

information that a user has previously flagged as being of interest, [0029]). Mancisidor and Schaffer are analogous art because they are from the same field of endeavor of providing recommendations for a user. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]). Therefore, it would have been obvious to combine Schaffer with Mancisidor to obtain the invention as specified in the instant claim(s).

With respect to claim 2, Mancisidor teaches updating said fuzzy user file according to a user's feedback from the recommended information (i.e. customer profile is updated to reflect if customer was satisfied or dissatisfied with recommendation, [0039]).

With respect to claim 3, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisidor does not explicitly disclose a user's interest and a weighted value. However, Schaffer teaches judging the user's actual interest-degree according to the relative ratio of an amount of time in which the user watches the recommended information to an amount of time in which said recommended information is actually broadcast, thereby updating the user's parameters (i.e. users interest can be determined by calculating a weighted value w , based on a function of the time the user is watching a program, [0027]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 4, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisidor does not explicitly disclose what the selecting characteristic is made up of. However, Schaffer teaches selecting characteristic includes a ternary array which includes content characteristic, a preference and a weight (i.e. customer characteristics are based on content characteristics (personality profile), preference (nominal recommendation), and weight, [0027, figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 5, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisidor does not explicitly disclose how the user preference is made up. However, Schaffer teaches said

preference represents the degrees of the user's likes and dislikes (i.e. preference is indicated by 1 if it is satisfied by user request, 0 otherwise, [0027, figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisor and Schaffer before him or her, to modify the system of Mancisor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 6, Mancisor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisor does not explicitly disclose how the user preference is made up. However, Schaffer teaches the preference and the weight of said selecting characteristic is expressed with a fuzzy set (i.e. fuzzy function is made like preferences and weights, [0026-0034, figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisor and Schaffer before him or her, to modify the system of Mancisor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 7, Mancisor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisor does not explicitly disclose an equation or matrix that shows how the recommendation is made

based on user data. However, Schaffer teaches $UP = ((t_1, l_{d1}, w_1), (t_2, l_{d2}, w_2), \dots, (t_i, l_{di}, w_i))$ wherein (t_i, l_{di}, w_i) is a said selecting characteristic, t_i is a content characteristic, i is a serial number of the content characteristic t_i , l_{di} is the preference for the selecting characteristic, w_i is the weight of the selecting characteristic (i.e. the selecting characteristic, or final recommendation is made up of weight, nominal recommendation, and personal profile, [figure 6(2)]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 8, Mancisidor teaches said fuzzy user file is established in a fuzzy manner (i.e. system employs fuzzy logic, variables, and sets to establish and manage user information, [0036-0040]).

With respect to claim 9, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisidor does not explicitly disclose how the user information is matched using fuzzy logic to make recommendations. However, Schaffer teaches matching the specific information characteristic of said information with the relative selecting characteristic in said fuzzy user file to obtain the user's interest degree for said specific information characteristic by inference of the fuzzy logic (i.e. recommendations are created by musing fuzzy logic

along with weighting values and other factors, [0027]), and obtaining the user's comprehensive interest-degree for said information according to the obtained interest-degree for said specific information characteristic (i.e. users comprehensive interest degree, or final recommendation is partially based on the interest degree for specific information characteristic, w, [figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 10, Mancisidor teaches fuzzing said selecting characteristic and said interest-degree for the specific information characteristic (i.e. characteristic is measurable in a fuzzy variable, [0038]), and making a fuzzy process for the fuzzed selecting characteristic to obtain the fuzzed interest-degree for the specific information characteristic (i.e. system employs fuzzy logic, variables, and sets to make recommendations, [0036-0040]). Mancisidor does not explicitly disclose how the output recommendations are calculated. However, Schaffer teaches establishing a transforming mode for an variable with multi-input and single-output, said input variable being the user's selecting characteristic, said output variable being the interest-degree for the specific information characteristic (i.e. several characteristics are input to calculate an output variable final recommendation, [0027-0034, figure 6]), and de-

fuzzing the processing result to obtain the definite value of the interest-degree for the specific information characteristic (i.e. definite values are used to calculate final recommendations, [figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 11, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040], and mapping said interest-degree for the specific information characteristic to the comprehensive interest-degree for the information obtained with the fuzzy set (i.e. characteristic is measurable in a fuzzy variable, [0038]). Mancisidor does not explicitly disclose how the output recommendations are calculated. However, Schaffer teaches establishing a transforming mode for the input variable with multi-input and single-output, said input variable being the interest-degree for the specific information characteristic, said output variable being the comprehensive interest-degree for the information (i.e. several characteristics are input to calculate an output variable final recommendation, [0027-0034, figure 6]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of

Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

With respect to claim 12, Mancisidor teaches information receiving means for receiving information which includes the specific information characteristic (i.e. customer characteristics and traits are received by system, [0037, 0038]), and sieving means for recommending the matched information according to the predetermined conditions to the user according to the matching result (i.e. recommendation information is provided to the customer based on customer characteristics, [0063]). Mancisidor does not explicitly disclose how the user information is matched using fuzzy logic to make recommendations. However, Schaffer teaches fuzzy matching means for matching the received information with a fuzzy user file which includes the user's selecting characteristic by inference of the fuzzy logic (i.e. recommendations are created by musing fuzzy logic along with weighting values and other factors, [0027]). Mancisidor and Schaffer are analogous art because they are from the same field of endeavor of providing recommendations for a user. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Mancisidor and Schaffer before him or her, to modify the system of Mancisidor with the teachings of Schaffer in order to improve recommendations for a user (Schaffer, [0009]). The motivation for doing so would have been to improve recommendations (Schaffer, [0009]), with respect to time (Schaffer, [0010]), using fuzzy now logic (Schaffer, [0010]).

Therefore, it would have been obvious to combine Schaffer with Mancisidor to obtain the invention as specified in the instant claim(s).

With respect to claim 13, Mancisidor teaches user communicating means for a user's communicating the information with said system (i.e. user may communicate with system through telephone or internet [0063]).

With respect to claim 14, Mancisidor teaches user file revising means for updating the fuzzy user's file according to user feedback of the recommended information (i.e. user profile can be updated to reflect user feedback, [0095]).

With respect to claim 15, Mancisidor teaches fuzzy user file managing means for storing the fuzzy user files (i.e. user files are stored in a customer profile database, [0095, 0097]).

With respect to claim 16, Mancisidor teaches a system that employs fuzzy logic, variables, and sets to make recommendations [0036-0040]. Mancisidor does not explicitly disclose a recommendation table. However, Schaffer teaches the predetermined condition includes thresholds for ordering the matched information according to values of interest degrees respectively, and generating a recommendation table for the user (i.e. recommendation table is created, [0059]).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDRIA Y. BROMELL whose telephone number is (571)270-3034. The examiner can normally be reached on M-R 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexandria Y Bromell
Examiner, Art Unit 2167
July 10, 2008

/S. A. A./
Primary Examiner, Art Unit 2162

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